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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 930,960	08 17 2001	Vishnu K. Agarwal	M4065.0151 P151-A	2287

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EXAMINER

DOAN, THERESA T

ART UNIT PAPER NUMBER

2814

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/930,960

Applicant(s)

AGARWAL ET AL.

Examiner

Theresa T Doan

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-15,17-54,124 and 125 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-15, 17-54 and 124-125 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. An action on the RCE follows.

The amendment filed on 05/05/03 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Okutoh et al. (6,201,271) as previously cited.

Regarding claim 1, Okutoh et al. teach in figure 8 a capacitor, comprising:

an electrode having at least one layer 20 consisting of platinum-rhodium material and at least one layer 22 comprising platinum material on top of the platinum-rhodium

layer 20, wherein the layer consisting of platinum-rhodium comprises approximately 3 to approximately 40 percent rhodium and approximately 60 to approximately 97 percent platinum (column 9, lines 1-2).

Regarding claim 14, Okutoh et al. teach in figure 8 a capacitor, comprising:

a lower electrode comprising at least two layers, the first layer 20 consisting of platinum-rhodium material and a second layer 22 comprising platinum material on top of the platinum-rhodium layer 20, wherein the layer consisting of platinum-rhodium is an alloy comprising approximately 3 to approximately 40 percent rhodium (column 9, lines 1-2).

an upper electrode 24; and

a dielectric layer 23 of a ferroelectric or high dielectric constant dielectric material formed between the lower and upper electrodes, wherein the dielectric layer 23 is in contact with the platinum layer 22 of the lower electrode (column 8, lines 26-42).

4. Claims 1, 14 and 124-125 are rejected under 35 U.S.C. 102(e) as being anticipated by Okutoh et al. (6,180,974) as previously cited.

Regarding claim 1, Okutoh et al. teach in figure 14 a capacitor, comprising:

an electrode having at least one layer 208 consisting of platinum-rhodium material and at least one layer 209 comprising PtRhO material on top of the platinum-rhodium layer 208, wherein the layer consisting platinum-rhodium comprises

approximately 3 to approximately 40 percent rhodium and approximately 60 to approximately 97 percent platinum (column 26, lines 16-17).

Regarding claim 14, Okutoh et al. teach in figure 14 a capacitor, comprising:

a lower electrode comprising at least two layers, the first layer 208 consisting of platinum-rhodium material and a second layer 209 comprising PtRhO material on top of the platinum-rhodium layer 208, wherein the layer consisting platinum-rhodium is an alloy comprising approximately 3 to approximately 40 percent rhodium (column 26, lines 16-17);

an upper electrode 213; and

a dielectric layer 210 of a ferroelectric or high dielectric constant dielectric material formed between the lower and upper electrodes, wherein the dielectric layer 210 is in contact with the platinum layer 209 of the lower electrode (column 28, lines 26-54).

Regarding claims 124-125, Okutoh et al. teach in figure 14 a capacitor, comprising:

an electrode having at least one layer 208 comprising platinum-rhodium material and at least one layer 209 comprising PtRhO material on top of the platinum-rhodium layer 208, wherein the layer comprising platinum-rhodium material comprises approximately more than 20 percent rhodium as recited in claim 124 or less than 10 percent rhodium as recited in claim 125 (see column 26, lines 23-30).

5. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Desu et al. (5,790,366) of record.

Regarding claim 1, Desu et al. teach in figure 1C a capacitor, comprising:
an electrode having at least one layer 100 consisting of platinum-rhodium material and at least one layer 110 comprising PtRhO material on top of the platinum-rhodium layer 100, wherein the layer consisting platinum-rhodium comprises approximately 3 to approximately 40 percent rhodium and approximately 60 to approximately 97 percent platinum (column 5, lines 20-22).

Regarding claim 14, Desu et al. teach in figure 1C a capacitor, comprising:
a lower electrode comprising at least two layers, the first layer 100 consisting of platinum-rhodium material and a second layer 110 comprising PtRhO material on top of the platinum-rhodium layer 100, wherein the layer consisting platinum-rhodium is an alloy comprising approximately 3 to approximately 40 percent rhodium (column 5, lines 20-22);

an upper electrode (130,140,150); and
a dielectric layer 120 of a ferroelectric or high dielectric constant dielectric material formed between the lower and upper electrodes, wherein the dielectric layer 120 is in contact with the platinum layer 110 of the lower electrode (column 4, lines 7-64).

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-54 and 124-125 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-54 of U.S. Patent No. 6,297,527. Although the conflicting claims are not identical, they are not patentably distinct from each other because as follows: both U.S. Patent and instant application claimed multiplayer electrode for ferroelectric capacitors. Moreover, the claims 1, 14 and 38 in the U.S. No. 6,297,527 are either narrower version of the claims of the instant application or obvious variations thereof. For example, claim 38 in U.S. No. 6,297,527 "... the layer consisting of platinum material of the lower electrode" whereas claim 38 in the instant application claims "... the layer comprising platinum material of the lower electrode", that shows no different meaning between these two elements. The facts are that the claims of the U. S. Patent No. 6,297,527 and instant application have claimed the same goal and are not distinguished from each other.

Response to Arguments

8. Applicant argues on pages 4-5 that "Okutoh I does not teach or suggest an electrode having at least one layer consisting of platinum-rhodium material and at least one layer comprising platinum material on top of the platinum-rhodium layer," as recited in claim 1 and "a lower electrode comprising at least two layers, the first layer consisting of platinum-rhodium material and a second layer comprising platinum material on top of the platinum-rhodium layer" as recited in claim 14. The argument is not persuasive because Okutoh I teaches in figure 8 a capacitor, comprising: an electrode having at least one **layer 20 consisting of platinum-rhodium material** (emphasis added) and at least one layer 22 comprising platinum material on top of the platinum-rhodium layer 20 and a lower electrode comprising at least two layers, the first layer 20 consisting of platinum-rhodium material and a second layer 22 comprising platinum material on top of the platinum-rhodium layer 20 (column 9, lines 1-2).

9. Applicant argues on pages 5-6 that "Okutoh II does not teach or suggest an electrode having at least one layer consisting of platinum-rhodium material and at least one layer comprising platinum material on top of the platinum-rhodium layer," as recited in claim 1 and "a lower electrode comprising at least two layers, the first layer consisting of platinum-rhodium material and a second layer comprising platinum material on top of the platinum-rhodium layer" as recited in claim 14. The argument is not persuasive because Okutoh et al. teach in figure 14 a capacitor, comprising: an electrode having at least one **layer 208 consisting of platinum-rhodium material** (emphasis added) and

at least one layer 209 comprising PtRhO material on top of the platinum-rhodium layer 208 and a lower electrode comprising at least two layers, the first layer 208 consisting of platinum-rhodium material and a second layer 209 comprising PtRhO material on top of the platinum-rhodium layer 208 (column 26, lines 16-17).

10. Applicant argues on page 6 that "Desu does not teach or suggest an electrode having at least one layer consisting of platinum-rhodium material and at least one layer comprising platinum material on top of the platinum-rhodium layer," as recited in claim 1 and "a lower electrode comprising at least two layers, the first layer consisting of platinum-rhodium material and a second layer comprising platinum material on top of the platinum-rhodium layer" as recited in claim 14. The argument is not persuasive because Desu et al. teach in figure 1C a capacitor, comprising: an electrode having at least one **layer 100 consisting of platinum-rhodium material** (emphasis added) and at least one layer 110 comprising PtRhO material on top of the platinum-rhodium layer 100 and a lower electrode comprising at least two layers, the first layer 100 consisting of platinum-rhodium material and a second layer 110 comprising PtRhO material on top of the platinum-rhodium layer 100 (column 5, lines 20-22).

11. Applicant also argues on pages 6-7 that "Applicants respectfully disagree with the Office Action's contention that the claims of this case are obvious over the claims in Agarwal". The argument is not persuasive because claims 1-54 of U.S. Patent No. 6,297,527 and the claims 1, 4-15, 17-54 and 124-125 of the instant application are not

patentably distinct from each other because both sets of claims describe substantially identical structure as shown in figure 1. Even though, Applicant amended claims, for example in claims 1 and 14, by replacing "comprising" with "consisting of", but the double patenting rejection is still applicable to the amended claims.

The rest of applicant's arguments, addressed to the amended claims are considered in the rejections shown above.

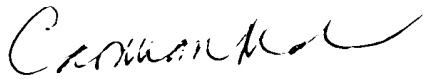
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T Doan whose telephone number is (703) 305-2366. The examiner can normally be reached on Monday to Thursday from 8:00AM - 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WAEL FAHMY can be reached on (703) 308-4918918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TD
June 13, 2003.


PHAT X. CAO
PRIMARY EXAMINER